

sunny

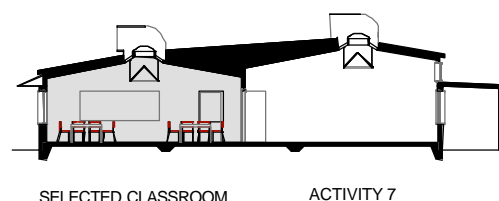
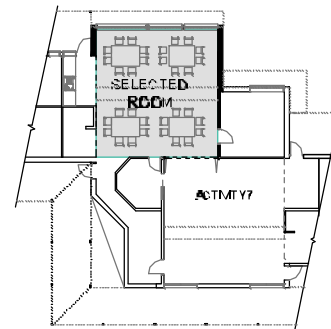
advanced skylight system



The Park Ridge Primary School is a public school designed for a maximum of 700 students. It consists of nine classrooms, several specialty spaces and 14 additional, movable classrooms. It was first occupied in February 1991. The use of passive solar strategies is an integral part of the school's overall design. On the eastern and western ends of the buildings the amount of windows is reduced to a minimum. Shaded glass is employed throughout the building. To balance the need for a consistent temperature during the summer and the necessity to effectively heat up the buildings in the winter, the materials had to be able to provide heat storage capacities. The windows as well as specially made steel mesh shades are placed such as to control glare and to prevent direct sunlight from entering the classrooms.



View from northeast towards classroom.



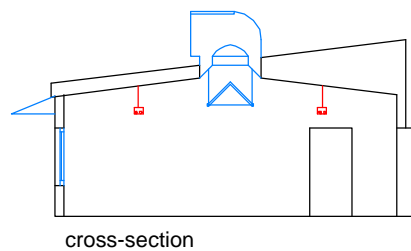
Floorplan and cross-section through selected classroom. Note that direct sun occurs on the North facade in the southern hemisphere.



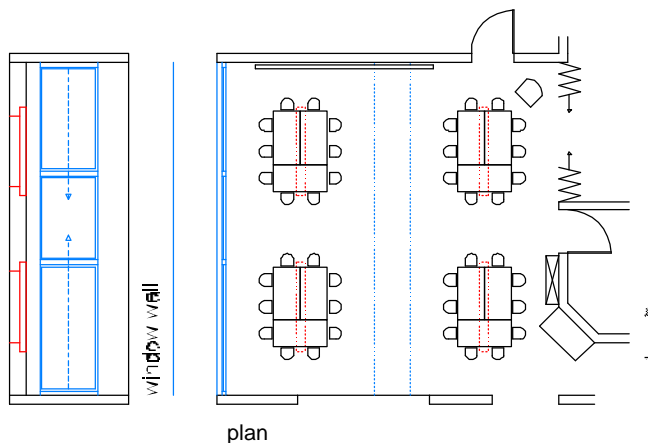
Interior view when the room is in use.



View of the barrel vault skylights.



cross-section



plan

building data

size	2 000 m ²
number of stories	1
architect	Taylor Oppenheim Architects Pty Ltd
daylight consultant	K.Poulton & Associates
year of completion	1991

of fice room

daylight strategy	bilateral, side and toplighting
dimensions (depth/width/height)	7,5 m / 7,5 m / 2,7-3,1 m
room area	56 m ²
floor	carpet, 13%
wall	paint, 59%
door	paint, 59%
ceiling	paint, 59%
blackboard	coating, 10%
north facing window	single glazing
skylight	double glazing
lamp types	fluorescent lamps
installed power density	10 W/m ²
control strategy	manual on, time clock off

facade		north facade	skylight tunnel
data	orientation	0°	zenithal
	glazed area	9,6 m ²	6,0 m ²
	opening index	0,47	0,08
function	daylighting	•	•
	view outside	•	•
	ventilation	•	•
	operable	•	•
	shading	•	•
	redirection	•	•
		•	•
function systems		steel mesh shade	steel mesh shade deflector
function	sun shading	•	•
	glare protection	•	•
	redirection	•	•
location	inside	•	•
	window pane	•	•
	outside	•	•
	movable	•	•
	fixed	•	•